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REMARKS

Upon entry of this amendment, claims 1, 4 - 8, and 10-17 remain pending. Claims 1, 4, 10, 13, and 17 are the only independent claims.

Allowable Subject Matter

Claims 4 and 13 were indicated as defining allowable subject matter. Claims 4 and 13 have been amended herein so as to be written in independent form. It is noted that for claim 4, the subject matter of intervening dependent claims 2 and 3 has not been included in amended claim 4. The subject matter of intervening dependent claims 11 and 12 has been included in amended claim 13.

It is respectfully submitted that claims 4-7 and 13-16 are now in condition for allowance.

Rejected Claims

WO 98/29673

Claims 1-3 were rejected under 35 U.S.C. § 103 as being unpatentable over WO 98/29673 to Young. It is respectfully submitted that the WO 98/29673 document is not prior art as to the present claims. In particular, the WO 98/29673 document corresponds to and, except for a few minor wording variations, is substantially identical in content to U.S. patent application Ser. No. 08/992,306 (U.S. Patent No. 5,921,879) from which the present application claims priority. In particular, the present application is a continuation-in-part from the 08/992,306 application so that even though all aspects of the presently claimed invention are not disclosed in the 08/992,306 application, the 08/992,306 application is not available as a prior art reference against the present application. Also, because the WO 98/29673 document (which was published in July 1998) is nearly verbatim identical to the 08/992,306 application, all disclosure in the WO 98/29673 document is predated by the disclosure of the 08/992,306 application filed in December 1997 (also claiming benefit of a 1996 provisional application). Accordingly, it is respectfully submitted that the rejection of claims 1-3 based upon the WO 98/29673 document has been overcome.

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U.S. 5,997,424

Claims 1-3 (and also 10-12 and 17) were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,997,424 to Young. The Examiner acknowledges that Young '424 does not disclose the invention defined by the present claims, but asserts that it would have been obvious to one of ordinary skill in the art to modify the device of Young '424 to that the second pressure angle would be at least 5 degrees greater than the first pressure angle.

A detailed study of the Young '424 document reveals that it *does not include any disclosure or fair suggestion as to any optimum separation or "delta" between the first and second pressure angles, and does not even hint that more (or less) separation is desired.* Instead, the Young '424 merely discloses that the engaging flank pressure angles for the two tooth profiles are different and both in the range of -2 to 12 degrees (for one embodiment) or are both in the range of -2 to 5 degrees (for a second embodiment). Given that the Young '424 document discloses that the pressure angles for all tooth profiles must lie within a maximum range of -2 to 12 degrees at most, it is respectfully submitted that a person of ordinary skill in the art would not have found it obvious that the selected pressure angles for first and second tooth profiles be at least 5 degrees apart from each other. As such, claim 1 is respectfully submitted to be patentable over the Young '424 document for at least this reason.

With continuing reference to claim 1, it has also been amended to include the subject matter of original claims 2 and 3, *that the first pressure angle be at least negative three (-3) degrees but not more than ten (10) degrees and that the second pressure angle be at least six (6) degrees but not more than twenty-three (23) degrees.* These differing ranges for the first and second pressure angles are clearly shown in FIGS. 6A, 6B and 6C of the present application, and nothing in the Young '424 document discloses or fairly suggests these ranges or even the use of different ranges for selecting the different profile pressure angles. *In fact, the Young '424 document teaches directly away from such differing ranges by disclosing that the pressure angles should all be in the same range of -2 degrees to 12 degrees for one embodiment (or both be in the same range of -2 degrees to 5 degrees for an alternative embodiment).* As such, the sprocket defined by amended

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claim 1 would not have been obvious to a person of ordinary skill in the art after studying the Young '424 document.

In light of the above amendments and remarks, it is respectfully submitted that claim 1 and dependent claim 8 are patentable over the Young '424 document. It is noted that claim 8 was separately rejected as being unpatentable over Young '424 in view of U.S. Patent No. 2,953,930. It is respectfully submitted that nothing in the disclosure of Meyer can overcome the limitations of the Young '424 document. As such, claim 8 is submitted to be in condition for allowance with independent claim 1.

Independent claims 10 and 17 (and dependent claims 11 and 12) are respectfully submitted to be in condition for allowance. As described above with reference to amended claim 1, it is respectfully submitted that a person of ordinary skill in the art would not have found it obvious that the selected pressure angles for first and second tooth profiles be at least 5 degrees apart from each other based upon the teachings of the Young '424 document which merely discloses the desirability of the first and second pressure angles being different, but selected from the same relatively narrow ranges.

Conclusion

The applicant and undersigned respectfully submit that this application meets all statutory requirements, and is now in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,



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